MPI-6 User Manual

Version 1.1

MPI-6 user manual

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important safety instructions

WARNING

To reduce the risk of fire or electric shock, do not expose this equipment to rain or moisture.

Equipment should not be exposed to dripping or splashing and no objects filled with liquids should be placed on the equipment.

1. Follow all instructions.
2. Do not use this equipment near water.
3. Clean only with dry cloth.
4. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
5. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
6. Only use attachments/accessories specified by the manufacturer.
7. Protect your equipment with surge protector and UPS equipment.
8. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as if the power-supply cord or plug is damaged; liquid has been spilled or objects have fallen into the apparatus; the apparatus has been exposed to rain or moisture; does not operate normally; or has been dropped.
9. Follow COMPLETE instructions for wiring the system and ALL system checks before powering the system on for the first time, to avoid irreversible damage to the components. Ensure proper polarity for wiring with regard to power, data and audio output.
10. Do NOT plug any n.FORM™ devices into a computer or network or like equipment other than n.FORM™ devices unless specifically asked to do so in the installation manual.

MPI-6 introduction

The MPI-6 is Lencore's music and page interface to be used for Emerald and iNET systems. The MPI-6 includes an analog phone line input as well as six audio inputs for music or additional paging sources such as microphones. The MPI-6 also incorporates relays to be used to trigger RAMP messages, strobes, or other external devices. Each audio input is monitored by the MPI-6 and six banks of LEDs indicate the audio signal level. The audio inputs can also be monitored by the internal speaker.

With the MPI-6 there is no need for additional cable home-runs, amplifiers, separate equalizers, special switching equipment or matching vendors for compatible product interfaces. The MPI-6's technology is so sophisticated that it can allow zone additions, modifications, deletions and other changes to the Mass Notification and Emergency Communication (MNEC) solution or paging system on the fly, without rewiring. This eliminates the need for running multiple home runs back to the electrical closet or through building risers to create separate or additional zones

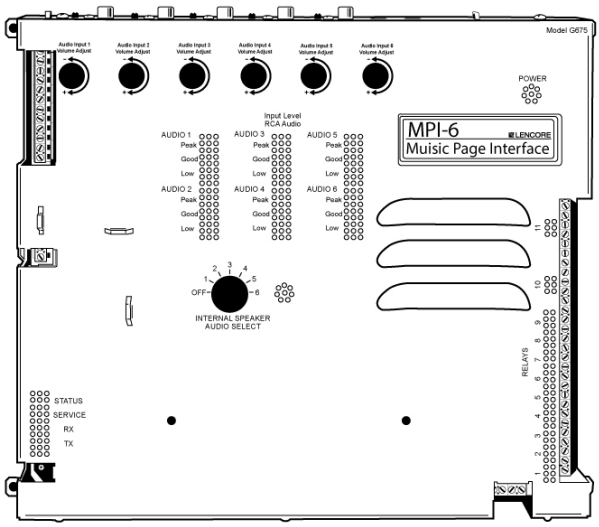
Link to product page

section 1

1.1 | components

Components

- Power LED.
- Status LED.
- Input level LEDs for music and paging (RCA inputs only – not phone).
- Neuron status LEDs.
- Relays status LEDs.
- Analog phone input.
- Built-in output relays.
- Page on/off switch (pushbutton) for one audio input (single blue RCA).
- Built-in speaker for testing/troubleshooting.
- Rotary selector switch to select any one of the six audio inputs to play over the internal speaker.
- Five stereo/mono switches to ground one RCA input of the stereo inputs to prevent noise from entering into the system from the unused RCA input.
- Service on/off momentary pushbutton to play pre-recorded music for testing/troubleshooting.
- Single turn pot for each of the 6 audio inputs (on front of enclosure for easy access) to adjust the input level.
- Ability to use existing Global MPI.
- Two pems on front of MPI to mount a din rail for an iLON.



section 2

2.1 | inputs and outputs

inputs

- Power input.
- POTS line input (RJ11).
- Ground 2-pos terminal block (screw terminals).
- iLON input 2-pos terminal block (screw connectors).
- 6 audio inputs (RCA connectors):
    1. Audio 1 (stereo)
    2. Audio 2 (stereo)
    3. Audio 3 (stereo)
    4. Audio 4 (stereo)
    5. Audio 5 (stereo) (iNET Music)
    6. Audio 6 (mono) (iNET Page)
- Page on/off 2-pos terminal blocks (screw terminals) to activate different page zones.
- Auxiliary inputs (2). For triggering the two aux output relays.

outputs

- Global MPI output (RJ45).
- Data output to OPs (RJ45) with two audio sources.
- 11 Relay outputs (9- SPST, 2- DPDT).
- Audio output (RJ45) for the additional four audio sources.

section 2

2.2| LEDs and switches

LEDs

Power – solid when board is powered
Status – blinks every 8 seconds and solid when paging. Solid when an IR remote button is pressed.
Relays status – solid when relay is closed.
Audio input level – six sets of three LEDs for audio input level detection. Yellow = low or no input. Blue = good audio level. Red = audio input too high.
Service – solid when Neuron is in service.
Rx – blinks when Neuron is receiving data.
Tx – blinks when Neuron is transmitting data

switches

Six stereo/mono switches to select the audio input type. If using a mono audio source, select mono to prevent any noise from the unused stereo input.

section 2

2.3 | operation

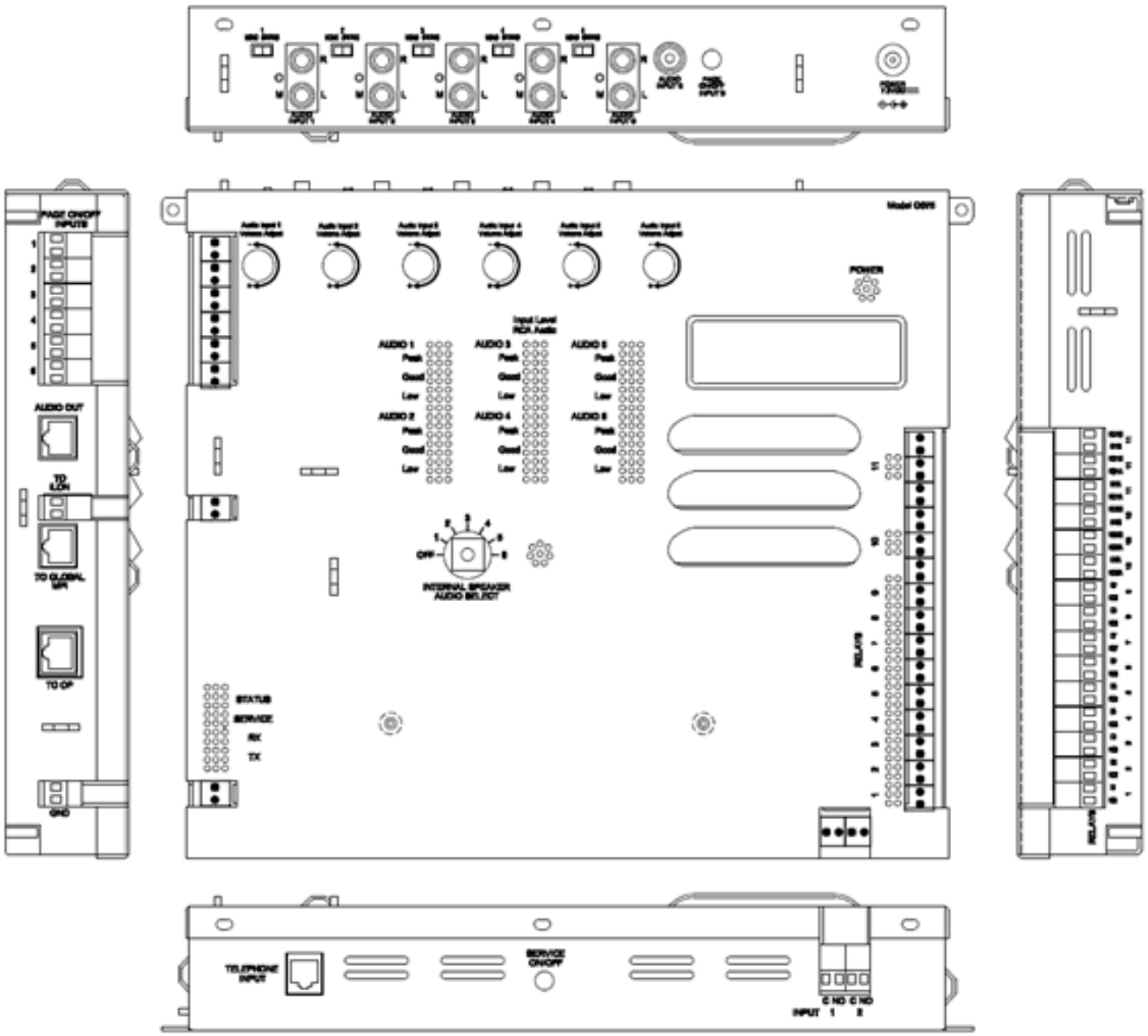


figure 1- overall MPI-6

Plug the power adapter into the MPI. The Power LED will be on and solid while the Status LED will blink for approximately 10 seconds. When the Status LED stays off, the MPI is ready to use.

section 2

2.4| phone paging

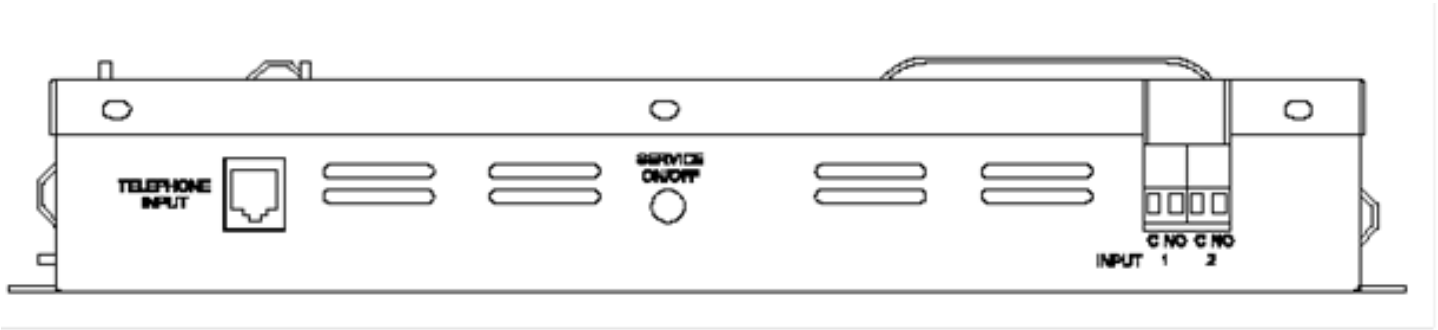


figure 2

1. Plug the analog phone line (RJ11) into the MPI Phone input.
2. Dial the extension of the phone line. The Status LED will turn on.
3. Wait for a tone from the MPI then press 00# for an all-call page or the zone number followed by the "#". Pressing the "*" while entering a zone number acts as a backspace if a digit was entered incorrectly and "*" will hang-up after pressing the "#."
4. Wait for a tone from the MPI then make the page. Hang up the phone receiver when the page is complete. The Status LED will turn off.

Note: Use 00 – 240 for all custom made zones (241 – 255 are reserved). Two or three digits may be used for zone numbers. See the Sound Manager or Reports manual for information on creating zones.

Preceding zeros will be ignored - 01# ~ 1# and 00# ~ 0#.

Telephone input – connect a POTS appearance telephone input to the MPI using an RJ11 connector.

Here is the basic specification for a POTS appearance line:
A CO (central office) POTS line is a 2 wire analog appearance.

1) It is a 2 wire (Tip and Ring) analog appearance.
2) It is configured to be loop start.
3) Battery voltage is 48 Volts.
4) Loop current of 23 milliamps.
5) Must have DTMF signaling capability.
6) Must have hang-up (winking) supervision.

Generally, the use of an FXS card (Foreign Exchange Station) or an ATA card (Analog Telephone Adapter) is required not an FXO (foreign exchange office) card.

Assign an extension to the port. Calling the extension will activate the paging system

section 2

2.5 | mic paging

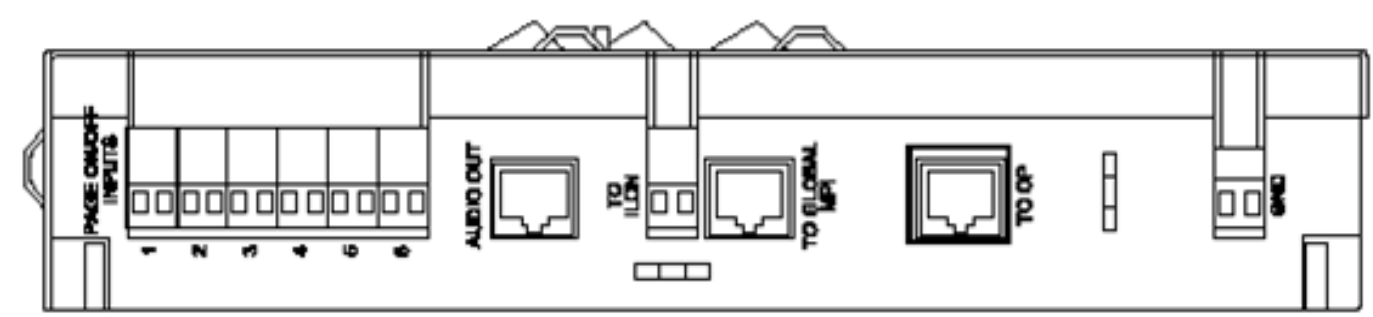


figure 3 - page on/off inputs

1. Connect a MIC to Lencore's MIC pre-amp.
2. Connect the audio output of the MIC pre-amp to one of the six audio inputs of the MPI.
3. Connect the MIC switch wires to one of the six "Page on/off Inputs" terminal blocks.

Each terminal block will trigger a specific page zone as follows:

- Input 1 = all-call
- Input 2 = zone 251
- Input 3 = zone 252
- Input 4 = zone 253
- Input 5 = zone 254
- Input 6 = zone 255

4. Press the MIC key and make the page.

Note: The zones must be configured with Lencore's Sound Manager or Reports software (iNET only). For iNET, use audio input 6 for MIC paging.

section 2

2.5 | RAMP paging

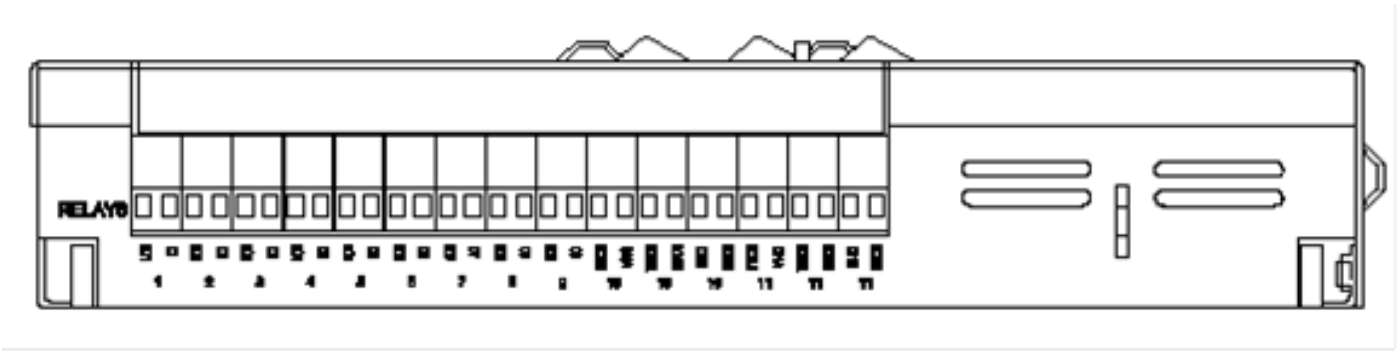


figure 4 - relay outputs

Use with a RAMP:
Note: DIP switch 5 on the RAMP must be down.
Relay outputs 1-8 can be used to trigger RAMP messages to replace the need for RIB relays. Use relay output 9 for the Stop relay to the RAMP. To play a message, simply dial the relay number of the message (see chart below). If a RAMP message is playing but a different message is desired, pressing the "*" will stop the current message from playing and allow another message to be triggered by simply entering the new relay number for the message.
Output relay DTMF trigger
811 = Relay 1
812 = Relay 2
813 = Relay 3
814 = Relay 4
815 = Relay 5
816 = Relay 6
817 = Relay 7
818 = Relay 8
"*" = Stop

IMPORTANT

When the RAMP is connected to the single RCA audio input 6, RIB relays must be used (acts the same as an iNET MPI). The RAMP's Play relay wires must be connected to Page On/Off Input 1 when using audio input 6.
Wire the relay outputs to the RAMP. Relay outputs 1 through 8 can be used to trigger RAMP messages 1 through 8. Relay output "9" is used for the RAMP "STOP" function. Connect each "C" to the RAMP "1-COMMON." Note that all the "C" terminals can be jumpered together at the MPI and only one wire brought to the RAMP "COMMON." Connect each "NO" to the RAMP "START" message number required to play. Connect the "NO" of relay "9" to the RAMP "10-STOP" terminal. The RAMP Play relay output must be connected to one of the page inputs.

Note: The zones must be configured with Lencore's Sound Manager or Reports software. For iNET, use audio input 6 for RAMP paging.

section 2

2.6 | relay outputs

Paging Priorities:

MIC all-call over phone.
MIC all-call over MIC zone.
Phone all-call over MIC zone.
Last MIC zone triggered over any playing MIC zone.
Phone zone over MIC zone.
All paging will duck music.

Audio inputs (figure 5) – The MPI includes 6 audio inputs – 5 stereo and one mono. Connect a line-level audio source to any of the audio inputs using an RCA cable. The first five inputs are stereo inputs. If the source is mono, slide the switch to the mono position and use the "M" input. The sixth audio input is mono only.

Note: For iNET, use Audio source 5 for Music and Audio source 6 for Paging.

Music:

Audio inputs 1 through 5 can be used for background music (audio input 6 is for paging only). The stereo inputs can be used with a mono audio source. There is a stereo/mono switch by each stereo input that can select between a stereo or mono signal. Each audio input can be adjusted for the proper level by turning the associated potentiometer CW or CCW (figure 6). For iNET, use audio input 5 for music.

section 2

2.7 | audio inputs

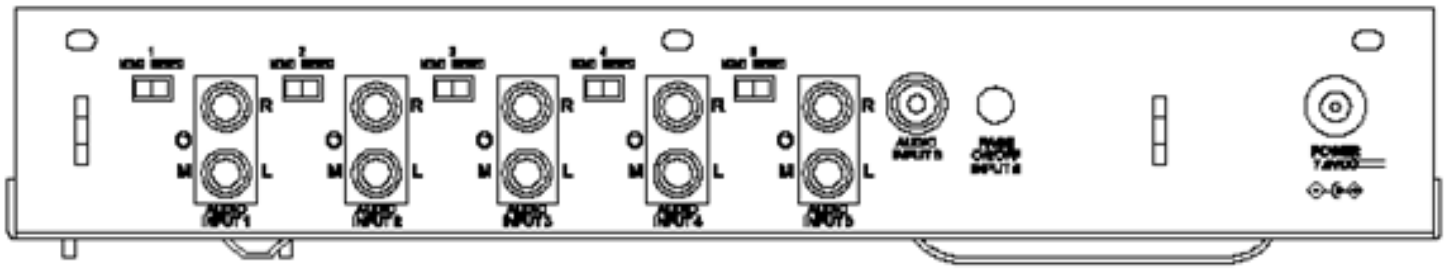


figure 5 - audio inputs

Audio input adjustment (figure 6) – There are six audio input adjustments – one for each audio input. Using a flat-blade screwdriver, turn the adjustments CW to increase the input level and CCW to decrease the input level. The ideal audio input level can be adjusted so the blue LED is on or flickering. Increase the level if only the yellow LED is on. Reduce the level if the red LED is on.

Note: The music zones must be configured with Lencore's Sound Manager or Reports software (iNET only). For iNET, use audio input 5 for Music.

section 2

2.8 | audio input adjustment

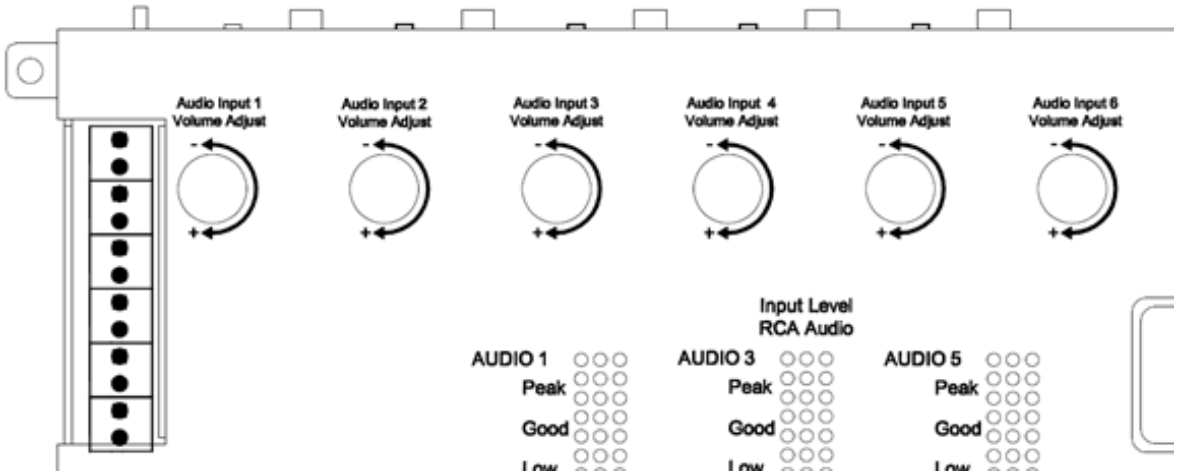


figure 6 - audio input adjustment

Other:

Service button (figure 2)-

Pressing the Service button plays a short audio clip over the audio source 6 lines. After pressing the Service button, the Status LED will flash indicating that the audio clip is playing. Pressing the Service button again, will stop the audio clip from playing and the Status LED will stop flashing and turn off.

Auxiliary inputs/outputs (figures 2 & 4)-

The auxiliary input/outputs can be used to control external devices such as a strobe.

Closing aux input 1, triggers aux output relay 11.

Closing aux input 2, triggers aux output relay 10.

section 2

2.8 | audio input adjustment

Internal speaker source select (figure 1)-

The rotary selector switch can select the audio source to play over the internal speaker. The selector switch has seven positions. The first (fully CCW) position is the off state. The other six positions will play the audio source selected (1-6 CW) over the internal speaker.

Page on/off button (figure 5)-

Pressing the Page on/off button enables a page from audio input 6. The status LED will be on and solid during the page. Pressing the Page on/off button again stops the page and the Status LED will turn off. This can be used for trouble-shooting purposes.

See figure 7 for the overall I/O layout.

section 2

2.9 | overall I/O

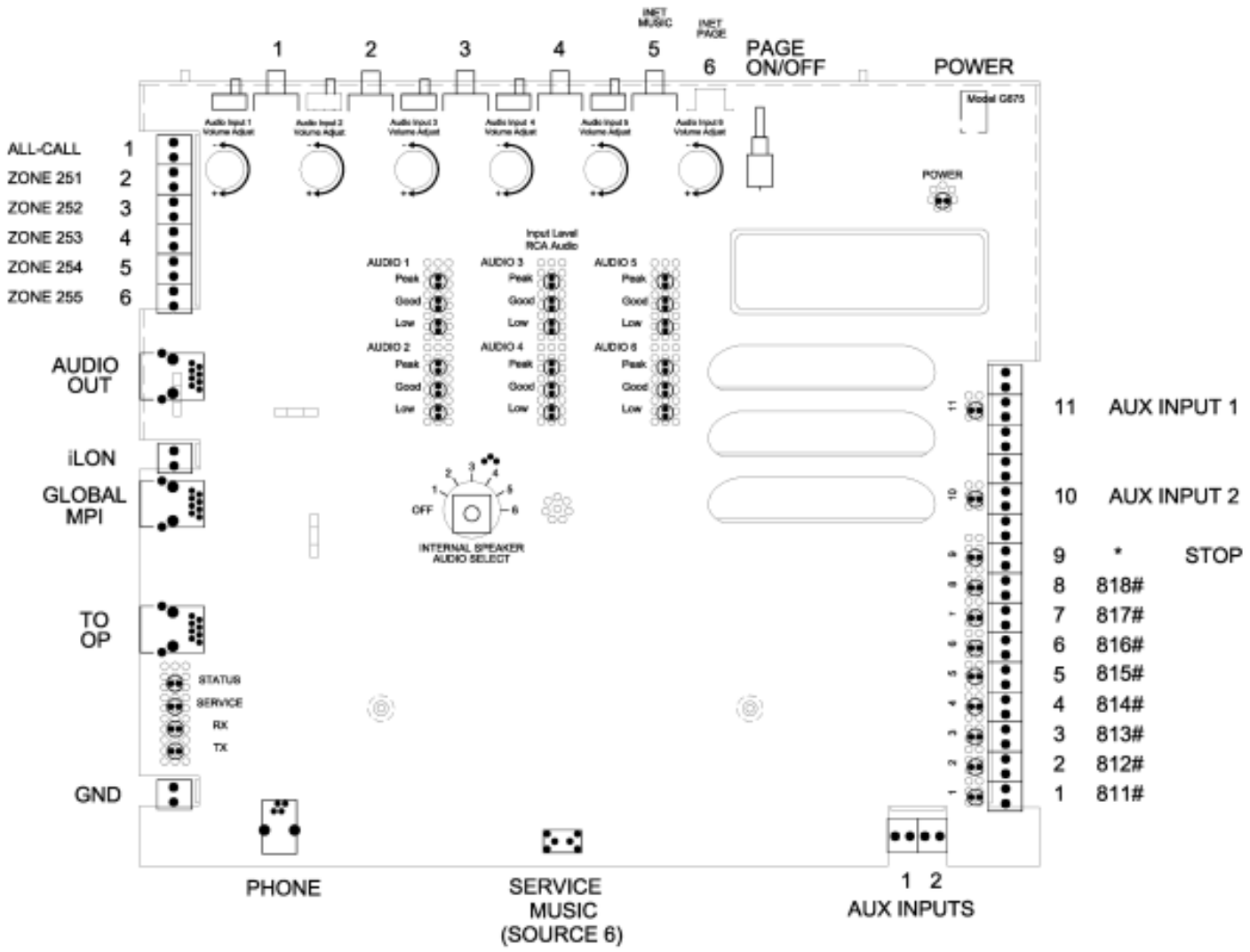


figure 7 - overall I/O

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